

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
28 April 2005 (28.04.2005)

PCT

(10) International Publication Number
WO 2005/037947 A1

(51) International Patent Classification⁷:
5/06, 3/18

C09K 3/00.

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(21) International Application Number:
PCT/JP2004/015968

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 21 October 2004 (21.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-362427 22 October 2003 (22.10.2003) JP

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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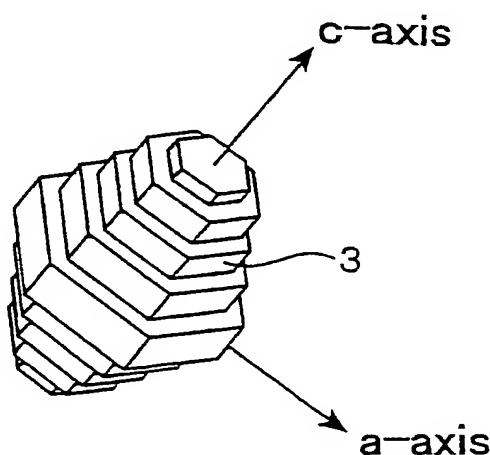
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Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CONTROL OF ICE-CRYSTAL GROWTH BY NON-PROTEINACEOUS SUBSTANCE



(57) Abstract: The present invention makes it possible to attain various applications using antifreeze activity without an antifreeze protein. The agent for the inhibition of ice-crystal growth includes a non-proteinaceous substance, wherein an aqueous solution of the non-proteinaceous substance in a concentration of 10 mg/ml causes the deposition of non-flat disk-shaped ice crystals. The agent for the lowering of an ice-crystal growth initiation temperature includes a non-proteinaceous substance, wherein an aqueous solution of the non-proteinaceous substance in a concentration of 10 mg/ml shows thermal hysteresis by a temperature of 0.020 C or higher. The agent for the control of water freezing includes a non-proteinaceous substance, wherein an aqueous solution of the non-proteinaceous substance in a concentration of 10 mg/ml shows thermal hysteresis by a temperature of 0.020 C or higher and causes the deposition of non-flat disk-shaped ice crystals. The above non-proteinaceous substances are usually polymers each having a carbon chain as the main chain.

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